

KNOW ALL ABOUT 

# WATER

the  
**Big  
SPLASH!**





First published in 2008 by  
The Energy and Resources Institute  
TERI Press  
Darbari Seth Block, IHC Complex, Lodhi Road, New Delhi - 110 003, India  
Tel. 2468 2100/4150 4900, Fax: 2468 2144/2468 2145  
India +91 • Delhi (0)11  
Email: [teripress@teri.res.in](mailto:teripress@teri.res.in) • Website: <http://bookstore.teriin.org>

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ISBN 978-81-7993-174-5

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Printed and bound in India

This book is printed on recycled paper

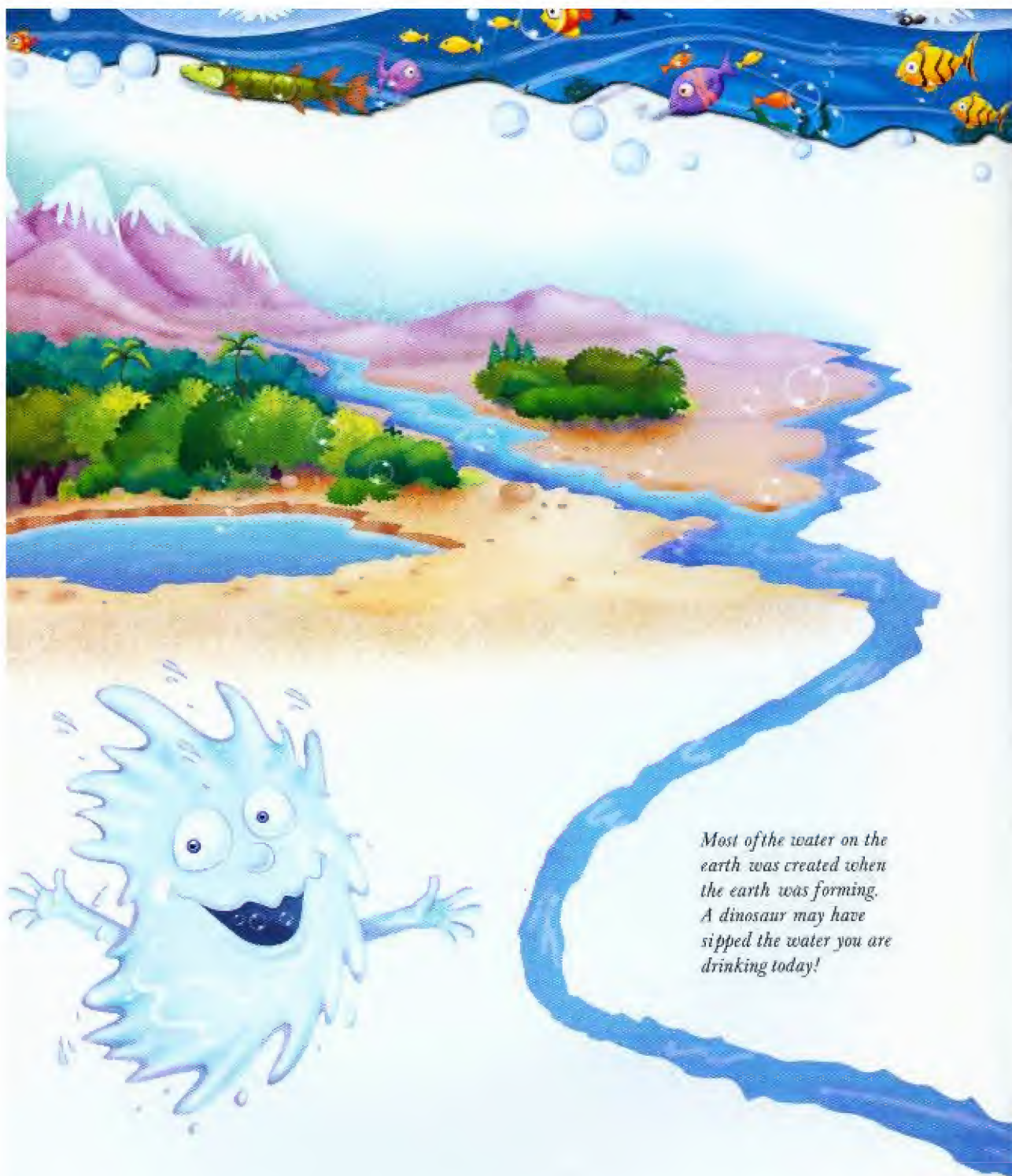


# WATER



the  
**Big**  
**SPLASH!**





*Most of the water on the earth was created when the earth was forming. A dinosaur may have sipped the water you are drinking today!*

We drink water, and wash and clean ourselves with it. Little seeds need water to grow into big trees. Huge elephants slurp it up in their trunks and splash it all over themselves. Your body, too, has water.





# WHAT IS WATER?

Water:

THE BIG SPLASH!

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## Where does water come from?

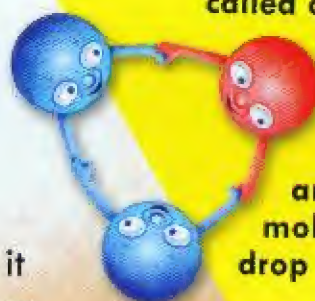
There is water on the earth, inside it, and also all around it in the air.

### Fresh water

Most of the water on the earth is in the big oceans and seas. It is salty water, and we cannot drink it. We can only use the rest of the water. That's called fresh water.

### Surface water

A lot of fresh water is under you too. Yes, below the ground! This is groundwater. We use this water by drawing it from wells or by pumping it out. Sometimes, it rushes out of the earth on its own, and there we have a lovely spring.



Molecules are tiny things that make up everything around you. Water is made up of a molecule called oxygen, holding hands with two molecules of hydrogen. So scientists call it  $H_2O$ ! There are hundreds and thousands of water molecules in one single drop of water!

FUNNEE







# I SPY WATER

Water keeps changing the way it looks. Sometimes it flows, at times it is solid, and sometimes, it is in the air, but you can't see it at all!

## I spy liquid water

Fill a tall glass with a little water. Shake it a bit. Pour it into a big, broad bowl. It takes the shape of the bowl, doesn't it? Now pour it into a flat plate. It spreads out. Drop it into the sink. Does it break? No, it just flows down the drain! It is a liquid.



## I spy solid water

Take ice from the freezer. That is also water—cold and hard. It is water in the solid form.

Pick up an ice cube. It has a definite shape. Leave it in a bowl for a while. All the ice melts to form liquid water.



*Water does not have taste or smell, and it can dissolve many substances. That is how you get tasty lemonade just by adding a sprinkling of sugar and a squeeze of lime to it.*





*Water freezes at zero degrees Celsius. Celsius is a scale used to measure temperature.*

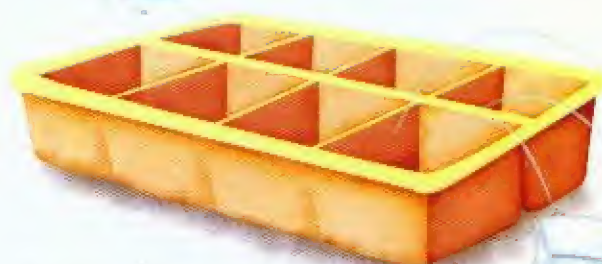
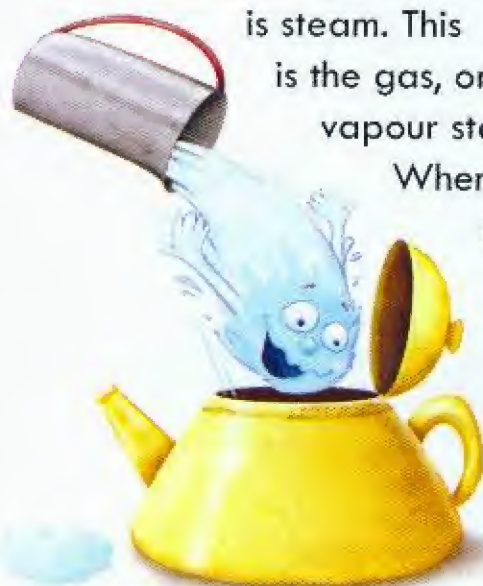
**Water:**  
**THE BIG SPLASH!**  
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### **I spy steam**

Have you seen boiling water in a kettle? Something escapes from the spout. That

is steam. This is the gas, or vapour state of water.

When water is heated, it flies up, up, and away!!



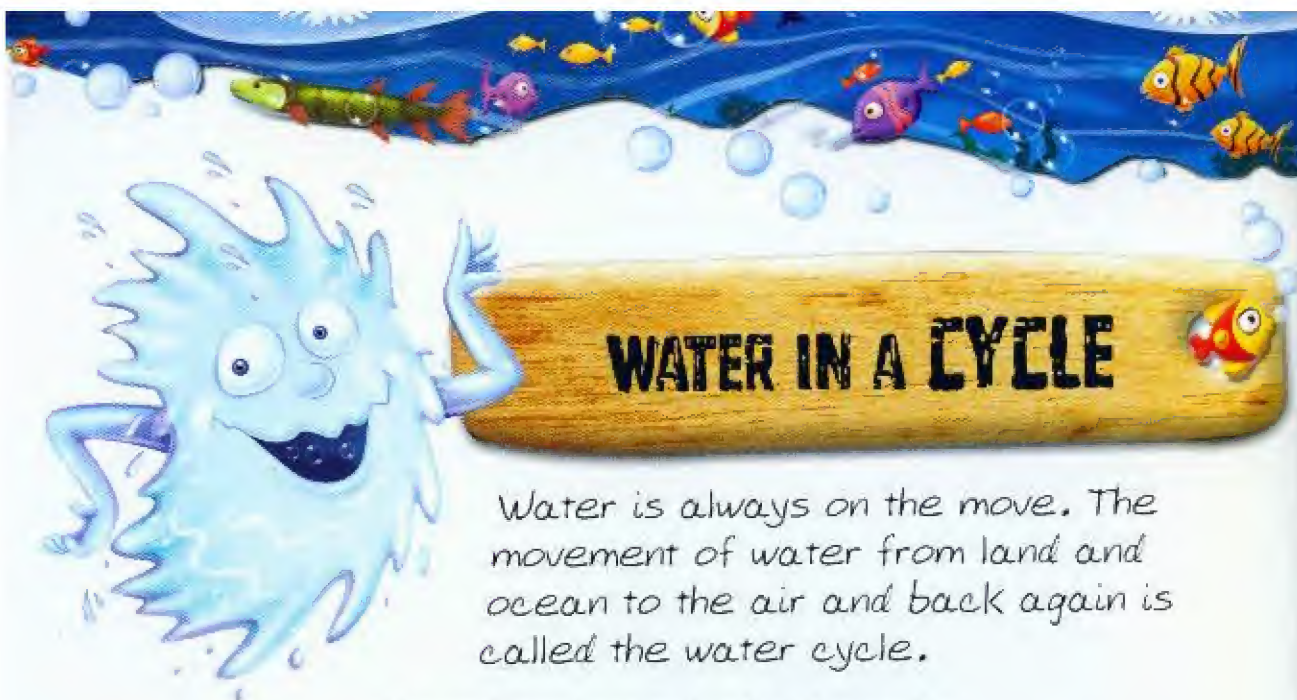
*It may be just gas, but steam is hotter than boiling water. So be careful around it.*



**BELIEVE IT OR NOT! ?**

Most liquids sink when they are in a solid state, but when water freezes, it floats! So, ice in lakes and rivers floats at the top. That is a good thing because it keeps fish from freezing to death in winter.





*Water is always on the move. The movement of water from land and ocean to the air and back again is called the water cycle.*

### **Round and round with the cycle**


It seems a good idea to start from the ocean. It's just so full of water. The sun heats the water. It changes into vapour or steam. Up, up, and away it goes! This journey of water is called evaporation.

### **If it goes up, it must come down!**

Up there in the sky it is much cooler, so the warm vapour cools into tiny droplets of water. This part of the journey is condensation. The droplets come together to form clouds.

Now, the wind takes the clouds wherever it goes. The clouds run into one another, join, and grow big. When the drops become big and heavy, they can't stay in the air anymore. They fall back to the earth as rain, snow or hail. This part of the journey is called precipitation.

And the journey starts all over again!



Water also comes out of plants as vapour! This is called transpiration.

**DID YOU KNOW**







**Water:**

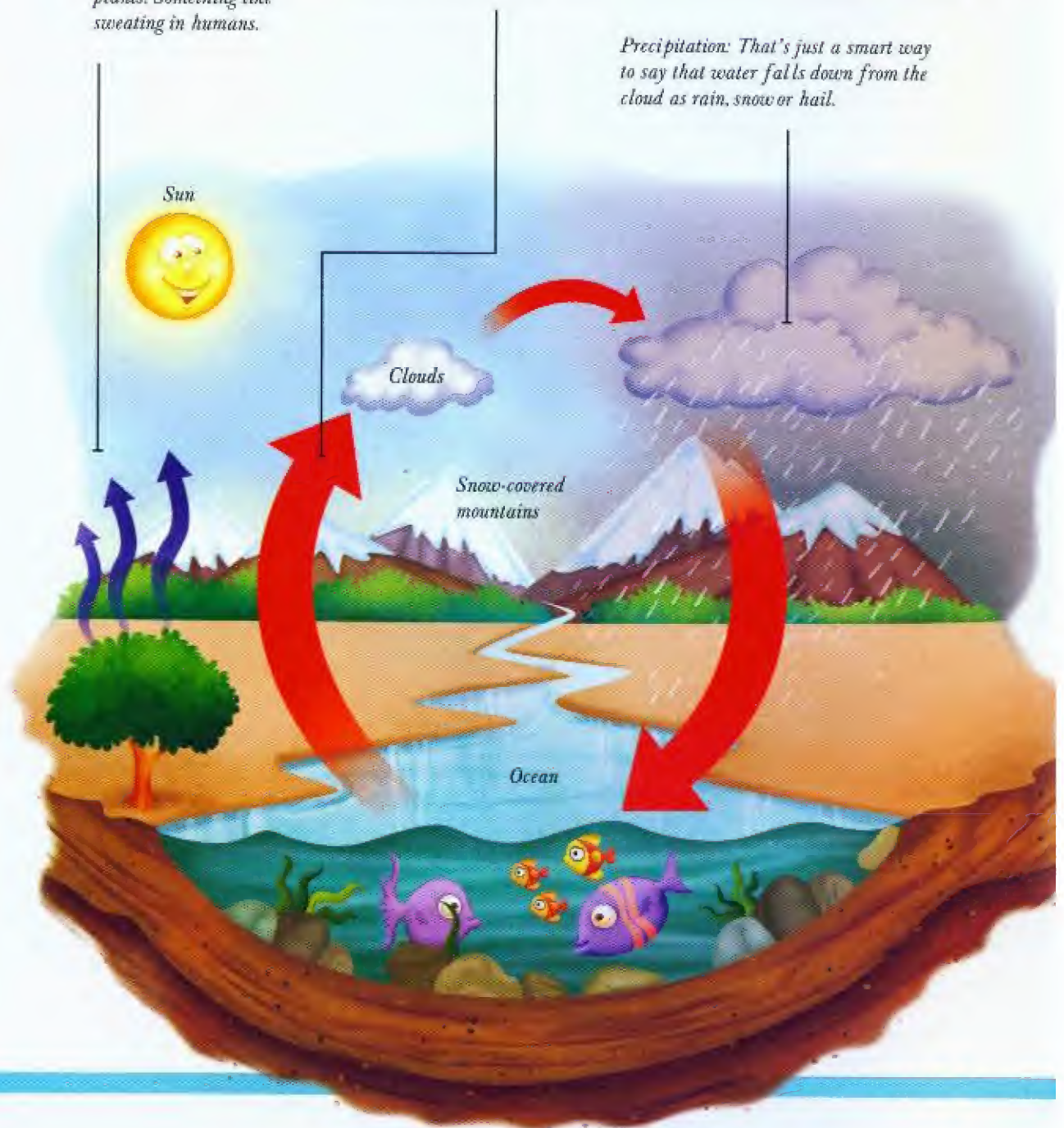
**THE BIG SPLASH!**

**6-7**

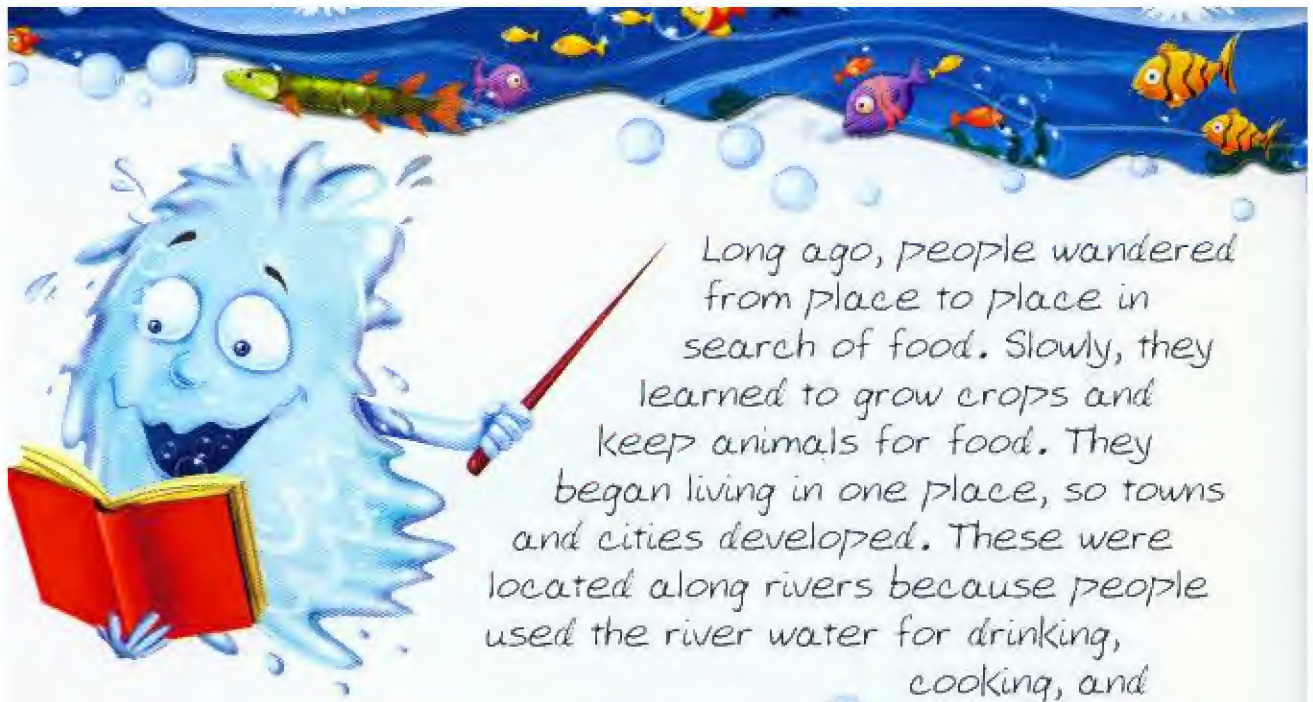
*Transpiration: This means water vapour is coming out of plants. Something like sweating in humans.*

*Evaporation: The nice way of saying water has changed from liquid to vapour. Flying up, up and away!*

*Precipitation: That's just a smart way to say that water falls down from the cloud as rain, snow or hail.*







Long ago, people wandered from place to place in search of food. Slowly, they learned to grow crops and keep animals for food. They began living in one place, so towns and cities developed. These were located along rivers because people used the river water for drinking, cooking, and growing crops. Today, we use much more water.

## WATER AND YOU

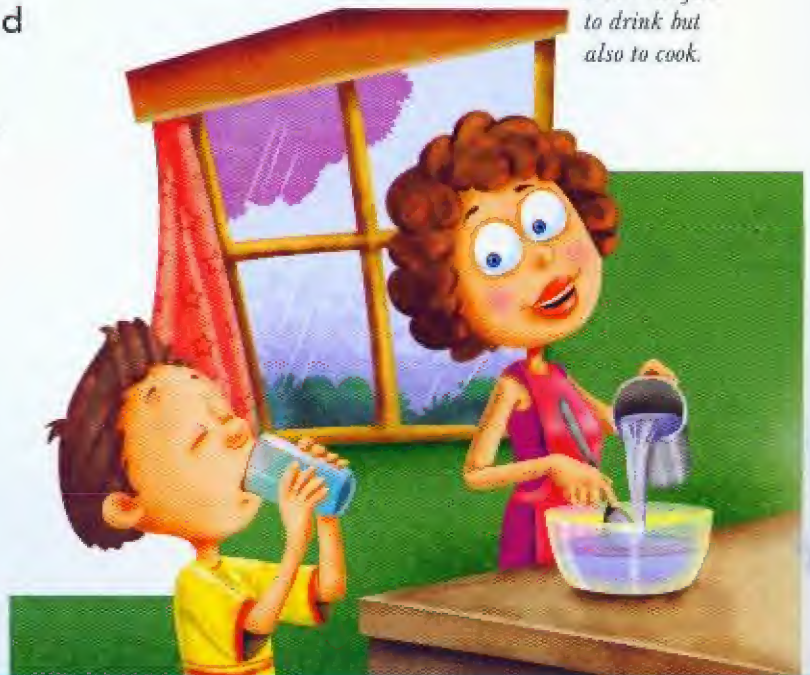
### At home

We use water at home for drinking, washing, and cooking. We clean our homes and water plants.

### In factories

Factories use a lot of water as they make different products. After they finish using it, factories should treat the water they have dirtied before letting it out.

*You need water not just to drink but also to cook.*







### In farms

Farmers use water for growing crops.

### Water to travel

People use boats to travel from one place to another along a river. A lot of goods are also carried on boats.

**Water:**  
THE BIG SPLASH!  
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*More than half the water that is used in a year in the world goes to irrigate farms.*

*Water can be loads offun! Don't you just love going to a water park? Or boating and swimming?*



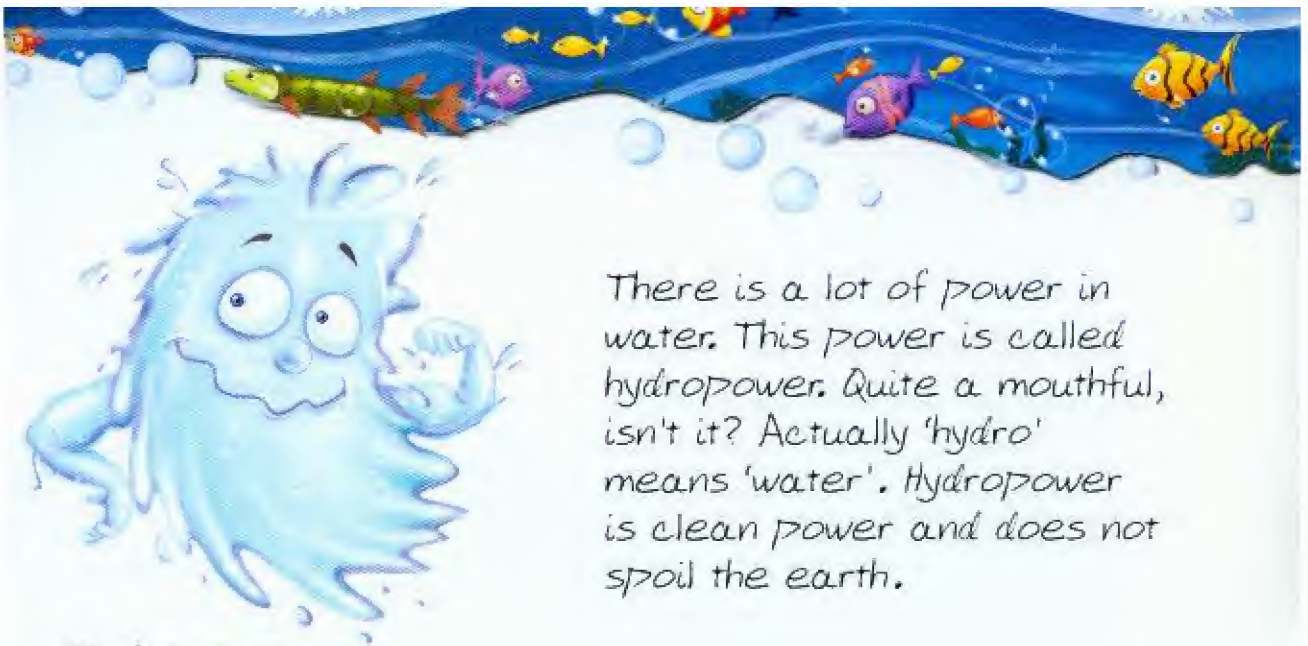
**FUNNEE!**



The city of Venice, Italy, is criss-crossed by canals, where boats called gondolas or water taxis called vaporettos ply! In Kerala, India, people travel in boats in the backwaters. Aleypee is famous for its boat races.







There is a lot of power in water. This power is called hydropower. Quite a mouthful, isn't it? Actually 'hydro' means 'water'. Hydropower is clean power and does not spoil the earth.

## Hydropower

There are many ways in which we use the power from water. We make electricity from water flowing down a height. This is hydroelectric power.

*Huge dams are built behind which water is held back.*

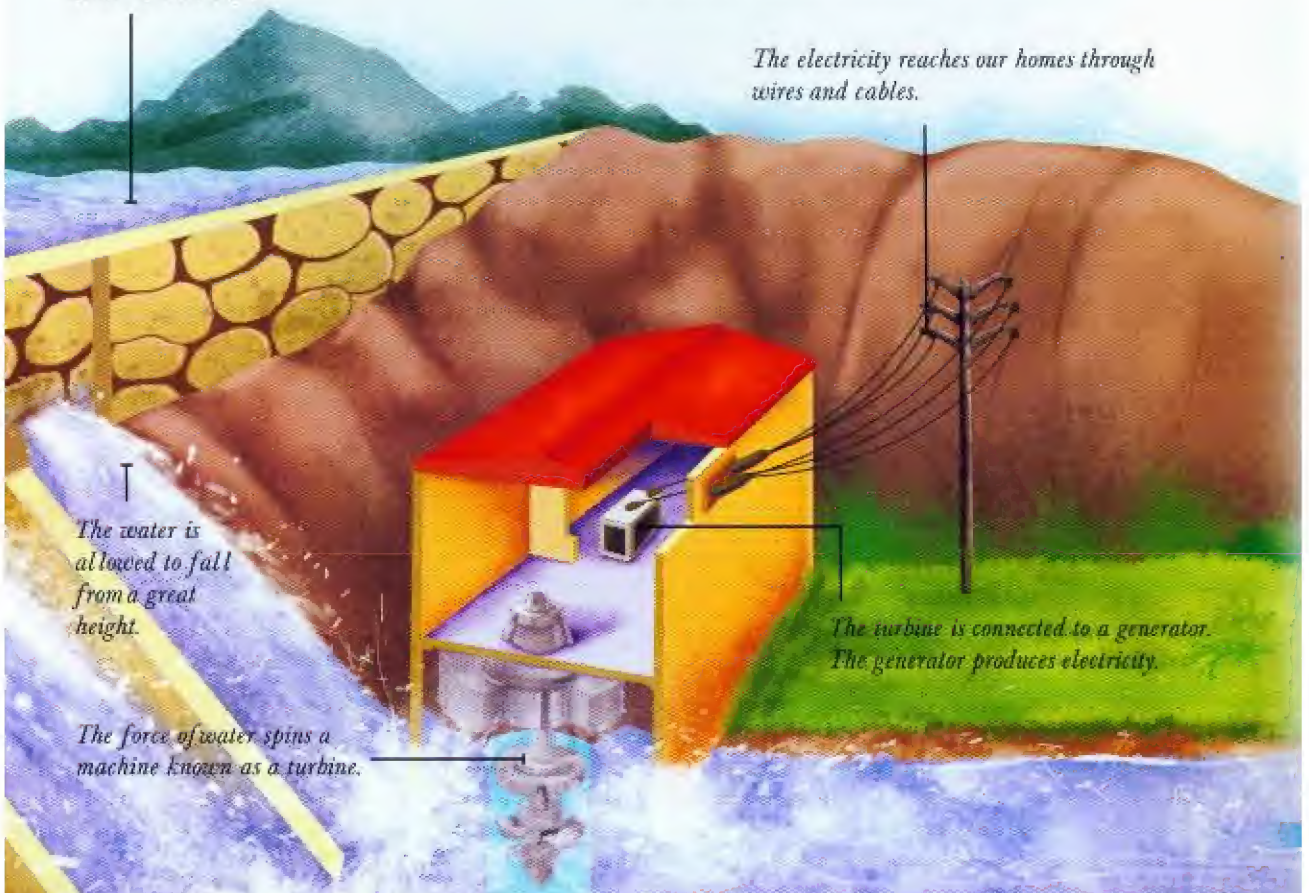
## HYDROELECTRIC PLANT

*The electricity reaches our homes through wires and cables.*

*The water is allowed to fall from a great height.*

*The force of water spins a machine known as a turbine.*

*The turbine is connected to a generator. The generator produces electricity.*







# WATER POWER

Water:

THE BIG SPLASH!

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## Power in the waves

The wind moves the water in the oceans to make big waves. These waves are very powerful. We have learnt how to get the power of the waves to help us. This is wave power.

*Tides spin a turbine, which looks like a fan, but is quite different. The turbine is attached to a machine that produces power.*



## Tidal power

The level of the sea keeps rising and falling. This is due to tides. During high tide, the water on the shore is deeper and comes right onto the beach. During low tide, the water is shallow and moves farther away from the beach. Tides have power, and in some places, this power is used to produce electricity.

DID YOU KNOW



Long ago, people in India and China used water power to turn waterwheels and watermills.







**KEEP ME CLEAN**



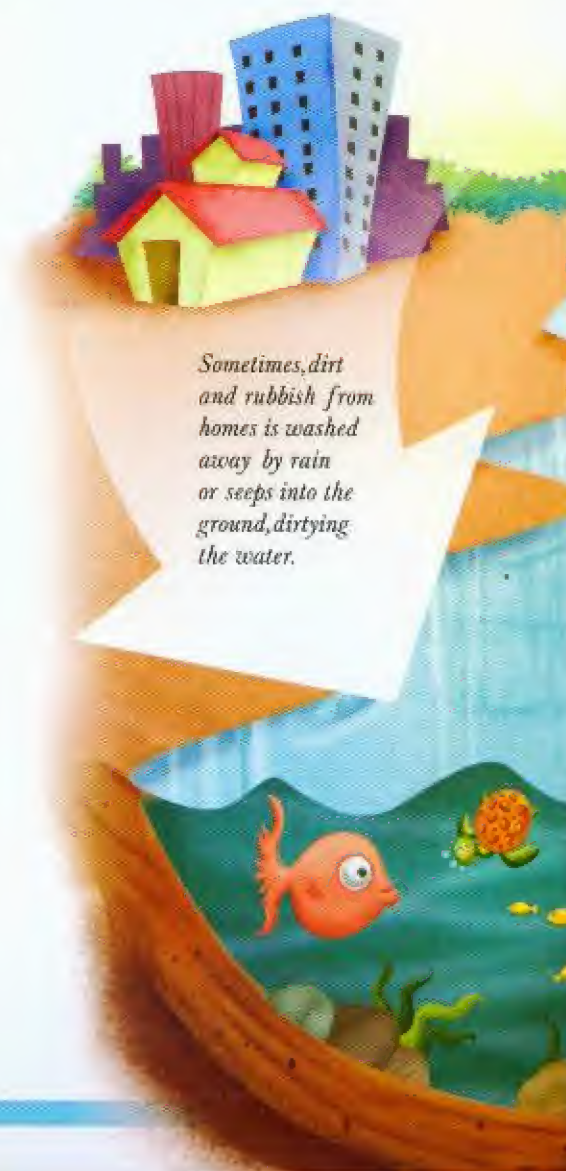
*Our water is getting polluted.  
That's the same thing as  
saying it's getting dirty.*

**How is our water getting polluted?**

Soap and detergent from our homes reaches the lakes and rivers. Some people dump garbage into the rivers and lakes.



*Nearly three-fourths of the earth is covered with water,  
but we can use only very little of this.*



*Sometimes, dirt  
and rubbish from  
homes is washed  
away by rain  
or seeps into the  
ground, dirtying  
the water.*





Farmers use chemicals to make the plants grow faster. These chemicals may enter the ground and move with the groundwater to reach a river or a lake. Chemicals from factories too can harm the water.

**Water:**  
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**12-13**



*Chemicals and other harmful materials from factories find their way to lakes and rivers, polluting them.*

### Why should we keep the water clean?

Of all the water on the earth 97 per cent is in the salty oceans. That means only 3 per cent is fresh water! Let's put it in a simpler way: out of every hundred jugs of water, we can use only three jugs. Now, if these three jugs of water get dirty we have a big problem, don't we? So we need to do our bit to keep water clean.

**DID YOU KNOW**



A man can live without food for a month, but without water, only for a week, at the most.







Water conservation means using less water in our daily work—just the amount that is needed. It also means thinking up ways and means of saving water.

### **Why conserve water?**

The number of people on our planet is increasing. This means that we are using more and more water. But the amount of water on the earth remains the same. It doesn't increase. So we need to conserve water. Simple, huh?

### *RAINWATER HARVESTING*







## WHAT IS WATER CONSERVATION?



**Water:**

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### **A good idea!**

Keep an empty drum outside to collect rainwater. You can give this water to your plants. This is what is called rainwater harvesting. It simply means collecting rainwater and keeping it for later use. Rainwater harvesting is a very good idea, but if you plan to collect rainwater in a drum, you need to be careful. You must not let the water stagnate too long. That allows mosquitoes to breed, and they can cause diseases like malaria or dengue. Now that wouldn't be nice, would it!

Planting trees in barren areas is another great idea to help in water conservation. Plants cover the soil and don't let it dry up. Then the soil will hold water inside for other plants to grow.



*Planting trees is a great way of saving water as well as soil!*

**Did You Know ?**

**Rainwater harvesting was used by the ancient people in India? They built tanks to collect rainwater. They also collected water that fell on the roof.**





Water conservation is one thing that children can do a lot about. The best place to begin is at home.

- Check that there are no leaking pipes or tanks. If you find one, ask an elder to repair it.

### **Bathroom:**

- Turn off the tap while brushing your teeth or soaping your hands.
- Flush the toilet only when necessary. Don't use it like a dustbin.



- Don't play in the shower. Five minutes should be enough.

### **Kitchen:**

- Do not throw the water after you wash vegetables, rice or pulses. Collect it and use it to water plants.

### **Outside:**

- The porch or balcony doesn't need to be washed with water every day. Sweep it clean instead.
- Water the plants at the ground/soil level.
- Water the plants early in the mornings or in the evenings. That way, the water doesn't escape as evaporation.
- Use a bucket of water to wash the car; do not a the hose pipe. It saves a lot of water.





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THIS IS A  
**GREEN**  
BOOK



# WATER

51580

## the BIG SPLASH!

Did you know that water goes round and round in an endless cycle—from oceans and rivers to the air and back again? And that water has a whole lot of power that can help us do work?

Discover many other interesting facts about water and the ways that you can help save it!

Other books in this series:

Sun: The Great Ball of Fire!

Wind: The Air in a Hurry!

Soil: The Precious Earth!

Space: The Great Beyond!

Earth: The Blue Marvel!

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ISBN 978-81-7993-174-5



9 788179 931745

MRP Rs 75

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Ages: 8-12